What is claimed is:

1. An inspection lamp having light emitting diodes as a source of radiation suitable for causing visible fluorescence of fluorescent materials, where said light emitting diodes are substantially non-identical in spectral characteristics of their emitted radiation, such that at least one but not all of said light emitting diodes in said inspection lamp produce wavelengths of radiation that are favorable for causing visible fluorescence of some fluorescent materials, and such that one or more different said light emitting diodes in said inspection lamp produce substantially different wavelengths of radiation which are more favorable than the wavelengths of first said light emitting diode(s) for causing visible fluorescence of some fluorescent materials other than first said fluorescent materials.

2. An inspection lamp as set forth in claim 1 where at least one light emitting diode has a peak emission wavelength in the ultraviolet and having at least one light emitting diode with a peak emission wavelength that is visible but suitable for causing visible fluorescence of fluorescent materials.

3. An inspection lamp as set forth in claim 1 where at least one light emitting diode produces mostly blue visible light and where at least one light emitting diode produces mostly visible violet light or ultraviolet radiation.

4. An inspection lamp as set forth in claim 3 where at least one light emitting diode has a peak emission wavelength in the range of 425 to 480 nanometers and at least one light emitting diode has a peak emission wavelength in the range of 360 to 430 nanometers.

5. An inspection lamp as set forth in claim 1 having one or more lenses to collimate the radiation produced by at least some of the light emitting diodes.

6. An inspection lamp as set forth in claim 5 where the radiation produced by each light emitting diode is collimated by a separate lens associated with or mounted forward from each said light emitting diode.

7. An inspection lamp as set forth in claim 1 having a handle.

8. An inspection lamp as set forth in claim 7 where the handle shares a longitudinal axis with the inspection lamp as a whole.

9. An inspection lamp as set forth in claim 7 where the handle does not share an axis with any other major portion of said inspection lamp.

10. An inspection lamp as set forth in claim 1 designed to accept one or more dry cells as a source of power.

11. An inspection lamp as set forth in claim 1 designed to accept power from an external power source.

12. An inspection lamp as set forth in claim 11 where the external power source is a source of direct current with a voltage of substantially 12 volts.

13. An inspection lamp as set forth in claim 11 where the external power source is a source of alternating current with a voltage of substantially 110-125 volts.

14. An inspection lamp as set forth in claim 11 where the external power source is a source of alternating current with a voltage of substantially 220-240 volts.

15. An inspection lamp as set forth in claim 1 having one or more rechargeable cells as a source of power.

16. An inspection lamp as set forth in claim 15 further having means to recharge its rechargeable cells.

17. An inspection lamp as set forth in claim 1 having one or more dropping resistors to limit the amount of current which flows through at least one of the light emitting diodes.

18. An inspection lamp as set forth in claim 1 having non-switching current regulation means to control the amount of current which flows through at least one of the light emitting diodes.

19. An inspection lamp as set forth in claim 1 having switching current regulation means to control the amount of current which flows through at least one of the light emitting diodes.

20. An inspection lamp as set forth in claim 1 of such design that at least one of the light emitting diodes does not require separate means to limit or control the amount of current flowing through said light emitting diode.

21. A module having light emitting diodes that are substantially non-identical and which produce a variety of wavelengths suitable for exciting a variety of fluorescent dyes, and suitable for replacing the bulb and/or the reflector of a flashlight so as to achieve an inspection lamp as set forth in claim 1.

22. An inspection lamp as set forth in claim 1 containing one or more light emitting diode modules as set forth in claim 21.

23. An inspection lamp as set forth in claim 1 having one or more light emitting diode modules, where at least one light emitting diode module has only one type of light emitting diode but the inspection lamp as a whole includes more than one type of light emitting diode so as to produce a variety of wavelengths suitable for exciting a variety of fluorescent dyes.

24. An inspection lamp as set forth in claim 23 where at least one light emitting diode module is of a type suitable as a bulb replacement in a flashlight.

25. An inspection lamp having:

a. Two or more light emitting diodes which produce radiation suitable for causing visible fluorescence of fluorescent materials,

b. A lens forward from each of said light emitting diodes to collimate the radiation from each light emitting diode into a beam,

such that the beams of radiation individually associated with each of said light emitting diodes project forward from said lenses and merge together.

26. An inspection lamp as set forth in claim 25 where the individual beams project forward from each lens are parallel to each other.

27. An inspection lamp as set forth in claim 25 where the individual beams converge towards each other such that the axes of the beams intersect with each other at a specific distance forward of the lenses.

28. An inspection lamp as set forth in claim 27 where the individual beams have an angular diameter greater than any angle between any two axes of said beams, such that some area can be illuminated by all said beams at any distance from the lenses greater than distance from the lenses to the point at which the beam axes intersect.

29. An inspection lamp as set forth in claim 25 where the lenses are comprised by a single piece of suitable transparent material.

30. An inspection lamp as set forth in claim 27 where each lens has a center of curvature of at least one curved surface displaced from the axis of its associated light emitting diode so as to form a beam having an axis that is not parallel to said axis of said light emitting diode.

31. A lens assembly having a longitudinal axis and convex lenses each having at least one curved surface with a center of curvature at a location other than on a line parallel to said lens assembly axis and passing through the center of the area of said lens, so as to be suitable to comprise the lenses of an inspection lamp as set forth in Claim 30.

32. An inspection lamp as set forth in claim 25 having a handle.

33. An inspection lamp as set forth in claim 32 where the handle shares a longitudinal axis with the inspection lamp as a whole.

34. An inspection lamp as set forth in claim 32 where the handle does not share an axis with any other major portion of said inspection lamp.

35. An inspection lamp as set forth in claim 25 designed to accept one or more dry cells as a source of power.

36. An inspection lamp as set forth in claim 25 designed to accept power from an external power source.

37. An inspection lamp as set forth in claim 36 where the external power source is a source of direct current with a voltage of substantially 12 volts.

38. An inspection lamp as set forth in claim 36 where the external power source is a source of alternating current with a voltage of substantially 110-125 volts.

39. An inspection lamp as set forth in claim 36 where the external power source is a source of alternating current with a voltage of substantially 220-240 volts.

40. An inspection lamp as set forth in claim 25 having one or more rechargeable cells as a source of power.

41. An inspection lamp as set forth in claim 40 further having means to recharge its rechargeable cells.

42. An inspection lamp as set forth in claim 25 having dropping resistors to limit the amount of current that flows through at least one of the light emitting diodes.

43. An inspection lamp as set forth in claim 25 having non-switching current regulation means to control the amount of current which flows through at least one of the light emitting diodes.

44. An inspection lamp as set forth in claim 25 having switching current regulation means to control the amount of current which flows through at least one of the light emitting diodes.

45. An inspection lamp as set forth in claim 25 of such design that at least one of the light emitting diodes does not require separate means to limit or control the amount of current flowing through said light emitting diode.

46. An inspection lamp as set forth in claim 25 where the light emitting diodes differ significantly in spectral characteristics so as to cause visible fluorescence from fluorescent substances which visibly fluoresce from the output of one or more but not all of said light emitting diodes.

47. An inspection lamp as set forth in claim 46 where at least one light emitting diode has a peak wavelength shorter than 425 nanometers and at least one light emitting diode has a peak wavelength longer than 425 nanometers.

48. An inspection lamp as set forth in claim 46 having separate switches for each type of light emitting diode comprised within said inspection lamp.

49. An inspection lamp having at least one light emitting diode with a peak wavelength which is ultraviolet and at least one light emitting diode having a peak wavelength which is visible.

50. An inspection lamp as set forth in claim 25 having at least one light emitting diode with a peak wavelength less than 425 nanometers and at least one light emitting diode with a peak wavelength greater than 425 nanometers.

51. An LED inspection lamp, comprising: a plurality of LED sources, each source for emitting electromagnetic radiation at a different peak wavelength, each different peak wavelength for causing visible fluorescence in a different leak detection dye.

52. The LED inspection lamp of claim 51, further comprising: a lens associated with each LED so that radiation passing through all lenses from their associated LEDs is substantially superimposed to a target area at a target distance from the lenses.

53. An LED inspection lamp, comprising: a single LED for emitting electromagnetic radiation at a peak wavelength for causing visible fluorescence in a leak detection dye, and a lens associated with the LED so that substantially all of the radiation passing through the lens is substantially directed to a target area at a target distance from the lenses.

54. An LED inspection lamp, comprising: a plurality of LEDs emitting electromagnetic radiation at a peak wavelength for causing visible fluorescence in a leak detection dye, and a lens associated with each LED so that the electromagnetic radiation passing through all lenses from their associated LEDs is substantially superimposed to a target area at a target distance from the lenses.

55. A lens adaptor, comprising: a lens housing for attachment to an LED inspection lamp with a single LED emitting electromagnetic radiation at a peak wavelength for causing visible fluorescence in a leak detection dye, and a lens within the housing, the lens and housing associating the lens with the LED so that substantially all of the radiation passing through the lens from the LED is substantially directed to a target area at a target distance from the lenses.

56. A lens adaptor, comprising: a lens housing and lenses, the lens housing for attachment to an LED inspection lamp with a plurality of LEDs emitting electromagnetic radiation at a peak wavelength for causing visible fluorescence in a leak detection dye, and the lenses for associating with each LED when the lens housing is attached to the inspection lamp so that the radiation passing through all lenses from their associated LEDs is substantially superimposed to a target area at a target distance from the lenses.

57. A lens and LED assembly for use within a flashlight casing, the assembly comprising: a plurality of LEDs emitting electromagnetic radiation at a peak wavelength for causing visible fluorescence in a leak detection dye, and a lens associated with each LED so that the electromagnetic radiation passing through all lenses from their associated LEDs is substantially superimposed to a target area at a

target distance from the lenses, and the assembly is shaped to fit within the flashlight casing.

58. An inspection lamp as set forth in claim 25 where the lenses are part of a lens assembly that is movable to permit adjustment of beam characteristics.

59. An inspection lamp as set forth in claim 58 wherein the distance between the lens assembly and the light emitting diodes is adjustable so as to permit changing the distance at which beam components formed by each light emitting diode and each associated lens element are best-formed.

60. An inspection lamp as set forth in claim 58 where the LED locations can be changed to permit adjustment of the angle at which beam elements formed by each lens of the lens assembly converge towards each other.

61. An inspection lamp as set forth in claim 60 where the distance between lens centers is smaller than the distance between the centers of their associated light emitting diodes so that the beam components formed by each lens from its associated light emitting diode converge towards each other.

62. An inspection lamp as set forth in claim 61 where the beam components formed by each lens from its associated light emitting diode converge towards each other so that all beam components coincide at a distance which can be changed by changing the locations of the LEDs.

63. An inspection lamp as set forth in claim 62 where the distance between the lens assembly and the light emitting diodes is adjustable so as to permit adjustment of the distance at which beam components are focused in addition to permitting adjustment of the distance at which beam elements are coinciding with each other.

64. An inspection lamp as set forth in claim 63 further incorporating means to restrict the possible adjustments to a range of adjustments where the beam elements are best-formed at the same distance forward from said inspection lamp at which said beam elements are coinciding with each other.

65. An inspection lamp as set forth in claim 1 where any of the light emitting diodes are superluminescent diodes.

66. An inspection lamp as set forth in claim 1 where any of the light emitting diodes are laser diodes.

67. An inspection lamp as set forth in claim 66 where any of the laser diodes is intended to normally operate in a laser mode.

68. An inspection lamp as set forth in claim 66 where any of the laser diodes is intended to normally operate in a non-laser mode.

69. An inspection lamp as set forth in claim 66 where oblong beams from each laser diode are directed into different directions so as to achieve an overall beam pattern that is not oblong.

70. An inspection lamp as set forth in claim 66 having optical means to correct the oblong characteristics of the beams produced by most types of laser diodes.

71. An inspection lamp as set forth in claim 70 having one more cylindrical lenses to correct the oblong characteristic of the laser diodes.

72. An inspection lamp as set forth in claim 66 where the oblong beam characteristic of laser diodes is corrected with optics other than cylindrical lenses.

73. An inspection lamp as set forth in claim 66 having laser diodes of such design as to produce beams not having the oblong characteristic typical of laser diodes.

74. An inspection lamp as set forth in claim 66 where the oblong beam characteristic typical of laser diodes is not corrected.

75. A light producing assembly comprising two or more light emitting diodes and a lens forward from each of the light emitting diodes such that the light from the light emitting diodes is collimated into a beam.

76. A spot light comprising a light producing assembly as set forth in claim 75.

77. A spot light comprising two or more light emitting diodes and a lens forward from each of the light emitting diodes such that the light from the light emitting diodes is collimated into a beam.

78. The spot light of claim 77, wherein each of one or more of the LEDs is offset from the optical center of its associated lens to cause the radiation passing through the lenses to be substantially superimposed to the target area at the target distance.

79. The spot light of claim 77 wherein the resultant beam is suitable for use as a fixed spot light.

80. The spot light of claim 77 further comprising means to accept essentially 120 volts alternating current as a power source.

81. The spot light of claim 77 further comprising means to accept essentially 230 volts alternating current as a power source.

82. The spot light of claim 77 further comprising means to accept essentially 12 volts direct current as a power source.

83. The spot light of claim 77 further comprising means to accept essentially 28 volts direct current as a power source.

84. The spot light of claim 77 further comprising means to accept direct current as a power source.

85. The spot light of claim 84, wherein the means to accept direct current as a power source will operate if the polarity of the direct current is reversed.

86. The spot light of claim 77 comprising light emitting diodes which are essentially identical.

87. The spot light of claim 77 wherein the light emitting diodes produce white light.

88. The spot light of claim 87 wherein the LEDs produce visible light of different colors.

89. The spot light of claim 77 wherein the light emitting diodes comprise red, green and blue light emitting diodes to achieve essentially white light.

90. The spot light of claim 77, wherein the spot light is a flashlight.

91. The spot light of claim 77 wherein the light emitting diodes individually produce light of different colors that combine to form light that is essentially white.

92. The spot light of claim 91 wherein orange, (green and blue)? light emitting diodes are used to achieve essentially white light.

93. The spot light of claim 91 wherein yellow, green and blue light emitting diodes are used to achieve essentially white light.

94. The spot light of claim 91 wherein yellow, green and blue light emitting diodes are used to achieve essentially white light.

95. The spot light of claim 91 wherein light emitting diodes essentially of two complimentary colors are used to achieve essentially white light.

96. The spot light of claim 91 wherein the light emitting diodes comprise light emitting diodes of more than three distinct colors.

97. The spot light of claim 88 wherein the spot light produces essentially yellow light.

98. The spot light of claim 77 wherein the lenses are part of a lens assembly that can be moved with respect to the light emitting diodes.

99. The spot light of claim 77, wherein the light emitting diodes comprise light emitting diodes of more than three distinct colors.

100. The spot light of claim 98, wherein the lens assembly is part of an assembly that slides over the light emitting diodes.

101. The spot light of claim 96, further comprises a thumbwheel used to adjust the distance between the lens assembly and the light emitting diodes.

102. The spot light of claim 77, wherein the distance between the lenses and the light emitting diodes is adjustable by rotating a collar that changes the distance between the lenses and light emitting diodes.

103. An LED light, comprising: a plurality of LEDs emitting electromagnetic radiation, and a lens associated with each LED so that the electromagnetic radiation passing through all lenses from their associated LEDs is substantially superimposed to a target area at a target distance from the lenses.

104. A lens adaptor, comprising a lens housing and lenses, the lens housing for attachment to an LED lamp with a plurality of LEDs emitting electromagnetic radiation, and the lenses for associating with each LED when the lens housing is attached to the lamp so that the radiation passing through all lenses from their associated LEDs is substantially superimposed to a target area at a target distance from the lenses.

105. A lens and LED assembly, the assembly comprising: a plurality of LEDs emitting electromagnetic radiation, and a lens associated with each LED so that the electromagnetic radiation passing through all lenses from their associated LEDs is substantially superimposed to a target area at a target distance from the lenses.

106. The assembly of claim 105, wherein the distance between the lenses and LEDs is adjustable so as to permit changing the distance at which beam components formed by each light emitting diode and each associated lens are best-focused.

107. The assembly of claim 105, wherein the LED locations can be changed to permit adjustment of the angle formed by each LED and its associated lens.

108. The assembly of claim 105, wherein the distance between lens centers is smaller than the distance between the centers of their associated light emitting diodes so that the beam components formed by each lens from its associated light emitting diode converge towards each other.

109. The assembly of claim 105, wherein the beam components formed by each lens from its associated light emitting diode converge towards each other so that all beam components coincide at a distance which can be changed by changing the distance between the LEDs and the lenses.

110. The assembly of claim 105, wherein the distance between the lenses and the light emitting diodes is adjustable so as to permit adjustment of the distance at which beam components are focused in addition to permitting adjustment of the distance at which beam elements are coinciding with each other.

111. The assembly of claim 105, wherein the distance between the lenses and the LEDs is adjusted by means of a thumbwheel.

112. The assembly of claim 105, wherein the distance between the lenses and the LEDs is adjusted by rotating a collar that moves the LEDs with respect to the lenses.

113. The lens assembly of claim 112, wherein the distance separating the LEDs from each other is adjustable along with the distance between the lenses and the LEDs.

114. The assembly of claim 113, wherein the distance between the LEDs and the distance between the lenses and the LEDs are both adjustable by the same adjustment.

115. An LED light having one or more LEDs, and a lens assembly forward of each of the LEDs to collimate the light from the LEDs into a beam, where each lens assembly has an adjustment in its effective focal length so as to provide an adjustability of the width of the beam.

116. The LED and lens assembly of claim 105, wherein the lenses are comprised within and spaced about a single lens mount, and the LEDs are mounted on a printed circuit board.

117. The LED and lens assembly of claim 116, further comprising a spacer through which the LEDs project, the spacer for correctly spacing the LEDs with respect to one another for alignment with the lenses.

118. The LED and lens assembly of claim 116, further comprising a separator between the lens mount and the LEDs, such that light from each LED cannot pass through the separator to a lens not associated with LED, and light from each LED can pass through the separator to the lens associated with that LED.

119. The LED and lens assembly of claim 116, further comprising a baffle, the baffle including a spacer through which the LEDs project, the spacer for correctly spacing the LEDs with respect to one another for alignment with the lenses, and the baffle including a separator between the lens mount and the LEDs, such that light from each LED cannot pass through the separator to a lens not associated with LED, and light from each LED can pass through the separator to the lens associated with that LED.

120. The LED and lens assembly of claim 119 wherein the baffle and lens mount are fixed to one another to limit relative movement of the baffle and the lens mount.

121. The LED and lens assembly of claim 116 wherein the printed circuit board is held in fixed relationship to the lens mount, with a desired distance between the lenses and their associated LEDs.

122. The LED and lens assembly of claim 116, wherein the lens mount has a tubular body extending away from the lenses, and the baffle fits within the tubular body until the separator meets the lens mount about the lenses.

123. The LED and lens assembly of claim 116 wherein the lens mount and lenses are integrated in a single piece of plastic.

124. The LED and lens assembly of claim 116 wherein the lens mount and lenses are formed from multiple fused pieces of plastic.

125. The LED and lens assembly of claim 116 wherein the lens mount has a tubular body extending away from the lenses, and the printed circuit board is fixed to the tubular body.

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